

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendments and in light of the following discussion, is respectfully requested.

Claims 1-6 and 8-10 are pending. Claims 1-2 are withdrawn from consideration. In the present amendment, Claims 3-6 and 8-10 are amended; Claim 7 is canceled without prejudice or disclaimer; and no claims are added herewith. Support for the present amendment can be found in the original specification, for example, at page 12, lines 10-15, and in original Claim 7. Thus, it is respectfully requested that no new matter is added by this amendment.

In the outstanding Office Action, Claims 3-5 and 7-10 were rejected under 35 U.S.C. § 102(b) as anticipated by Aoyama et al. (U.S. Publication No. 2002/0011321, hereinafter “Aoyama”); and Claims 3-10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Winter et al. (U.S. Patent No. 4,434,837, hereinafter “Winter”) in view of Aoyama.

Turning now to the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) based on Aoyama and Winter, Applicant respectfully requests reconsideration of these rejections and traverses these rejections, as discussed below.

The apparatus described in Claim 3 recites, in part, an electromagnetic agitator for generating an electromagnetic field through application of electricity to an outside of the furnace; a cooler for performing rapid cooling of the molten metal discharged from the furnace; ... wherein the electromagnetic agitator is configured to surround the outside of the furnace and the cooler to prevent dendrites from forming in the molten metal within the cooler. It is respectfully submitted that the cited references do not disclose or suggest each feature described in amended Claim 3.

In contrast, Aoyama describes a semi-solid metal slurry making apparatus including a reservoir furnace 2 which includes an electric furnace 21 surrounding a graphite crucible 22.¹ A melted metal launder 24 to feed melted metal is connected to a reservoir portion of the furnace 2.²

However, it is respectfully submitted that Aoyama does not disclose or suggest “an electromagnetic agitator for generating an electromagnetic field through application of electricity to an outside of the furnace...wherein the electromagnetic agitator is configured to surround the outside of the furnace and the cooler to prevent dendrites from forming in the molten metal within the cooler,” as recited in amended Claim 3.

Aoyama is silent with respect to an electromagnetic agitator for generating an electromagnetic field. Further, the Office Action takes the position that the electric furnace 21 of Aoyama teaches the claimed electromagnetic agitator and states “the electric furnace is capable of providing agitation to the melt thereby meeting this requirement in an apparatus claim...” However, the Office Action provides no rationale or evidence for how the electric furnace 21 of Aoyama is capable of providing such an agitation. Therefore, Applicant respectfully submits that Aoyama does not disclose or suggest every feature recited in amended Claim 3. Thus, it is respectfully requested that the rejection of Claim 3, and Claims 4-5 and 8-10 which depend thereon, as anticipated by Aoyama be withdrawn.

Winter discusses a semi-solid metal slurry apparatus. However, the Office Action on page 3 acknowledges that Winter does not disclose “any specific furnace structure from which the metal melt is delivered.” Accordingly, for at least the reasons discussed above with respect to Claim 3, it is respectfully submitted that Winter does not disclose or suggest each feature recited in Claim 3. Thus, it is respectfully requested that the rejection of Claim 3, and all claims dependent thereon, as unpatentable over Winter be withdrawn.

¹ See Aoyama, at paragraph [0048] and in Figure 5.

² See Aoyama, in Figure 5.

Accordingly, withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) based on Aoyama and Winter is respectfully requested.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

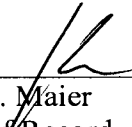
Respectfully submitted,

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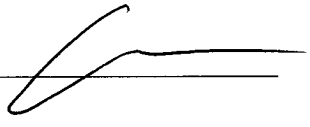
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